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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,467	03/07/2002	Yasumasa Otsuka	03500.016269	9039

5514 7590 07/10/2003

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EXAMINER

BRAUN, FRED L

ART UNIT PAPER NUMBER

2852

DATE MAILED: 07/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,467

Applicant(s)

Otsuka et al

Examiner

Fred L Braun

Group Art Unit

2852

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on March 7, 2002
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-18 ~~is/are~~ pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-18 ~~is/are~~ rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. The abstract of the disclosure is objected to because it fails to set forth a concise statement of that subject matter which applicants consider to be their contribution to the art to which the invention pertains. More specifically, the present abstract merely sets forth subject matter which is well known in the art as evidenced by the prior art cited hereinbelow. Correction is required. See MPEP § 608.01(b).

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

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(1) if a machine or apparatus, its organization and operation; (2) if an article, its method of making; (3) if a chemical compound, its identity and use; (4) if a mixture, its ingredients; (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The drawings are objected to because the drawings fail to properly indicate that Figure 6 is "PRIOR ART" in accordance with the practice set forth in MPEP 608.02(g). Also, there appears to be no mention of the reference numeral "14" shown in Figure 1 as required by 37 CFR 1.84(p)(5). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al.

As broadly as recited, base claim 14 can be a cylindrical metal substrate similar to that shown by applicants Figure 5 embodiment. Accordingly, it is submitted that cylindrical element 11 (Fig. 2) of Suzuki et al is the metallic substrate having a convex surface on one side and a concave surface on an opposite side, and element 15a (Fig. 2) of same is the heat generating resistor on one of the surfaces of the metallic substrate, recited in claims 14 and 17, respectively.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 15, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al as applied to claims 14 and 17 above, and further in view of Murooka et al.

The patent to Murooka et al suggests to one having ordinary skill in the art that the heat generating resistor 120c, 120b (Fig. 27) be mounted on the convex side of the metallic substrate, as recited in claim 15, for example, and that a first insulating layer 120n (Fig. 27) be disposed between the convex side of the metallic substrate 120a (Fig. 27) and the heat generating resistors 120c, 120b (Fig. 27) and that a second insulating layer 120p (Fig. 27) be provided on the other side of the heat generating resistor layer 120c, 120b (Fig. 27) from that of the first insulating layer 120n (Fig. 27) of same so that the heat generating layers are closer to the recording medium being fused and a heat loss or capacity due to the metallic substrate is minimized. As to claim 18, it is noted that column 6, lines 43-56 of Murooka et al also suggests that the metallic substrate 11 be in the range of thickness of 0.6mm so that it has a low or small heat capacity.

Therefore, to mount the heat generating layer resistor of Suzuki et al on the convex side of the metallic substrate of same and to provide first and second insulating layers on opposite sides of the heat generating resistor layer so that the metallic substrate has a low or small heat capacity, as suggested by Murooka et al, would be an obvious modification of the prior art to one having ordinary skill in the art at the time applicants invention was made.

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10. Claims 1-6, 9-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yano et al in view of Oda et al.

The patent to Yano et al suggests to one having ordinary skill in the art that a heater 3 (Fig. 2) for an image heating apparatus for a recording material be mounted in a holder 2 (Fig. 2) which has a guide surface, as recited in claim 6, for example, and that a film 1 (Fig. 2), having an elastic layer, as recited in claim 13, moving in contact with said heater forms a nip N (Fig. 2) with a back-up roller 4 (Fig. 2) via said film, as recited in base claim 1, for example. As to claim 6, it is submitted that the holder 2 (Fig. 2) of Yano et al inherently has a guide surface for guiding the film 1 (Fig. 2) of same.

The patent to Oda et al (column 6, line 45 through column 7, line 10) suggests to one having ordinary skill in the art that a heater including a metallic substrate 48 (Fig 3(a)) having a hollow cylindrical surface or convex surface on the side of the nip 40 (Fig 3(a)) which is formed by the back-up pressure roller 32 (Fig 3(a)) and the heater via the film 30(Fig. 3(a)) will have a high thermal conductivity.

Therefore, to provide the heating device of Yano et al with a heater which has a metallic substrate with a convex surface which faces the nip and which has a high thermal conductivity, as suggested by Oda et al, would be an obvious modification of the prior art to one having ordinary skill in the art at the time applicants invention was made.

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11. Claims 7, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yano et al in view of Oda et al as applied to claims 1-6, 9-11 and 13 above, and further in view of Murooka et al.

The disclosure of the patent to Murooka et al noted supra in the rejection of claims 15, 16 and 18 is hereby repeated and incorporated herein in its entirety.

Therefore, to mount the heat generating layer resistor of Yano et al on the convex side of the metallic substrate of same and to provide first and second insulating layers on opposite sides of the heat generating resistor layer so that the metallic substrate has a low or small heat capacity, as suggested by Murooka et al, would be an obvious modification of the prior art to one having ordinary skill in the art at the time applicants invention was made.

12. The patent to Wayman et al is cited of interest to further show the obviousness of using a film for the fusing device having a polyamide layer similar to that disclosed by applicants; and the patents to Tarumi et al, Byrne, Braun, and the Japanese publication by Taguchi et al, respectively, are cited of interest to further show the obviousness of using a metallic substrate for the heater of a fusing device which has a convex surface facing the nip of same.

13. Any inquiry concerning this communication should be directed to Fred L. Braun at telephone number (703) 308-0128.

Braun/ek

07/08/03

Fred L Braun
FRED L. BRAUN
PRIMARY EXAMINER
ART UNIT 2852